

Work Order ID 106482-1

\*106482\*

Page 1

September-03-13 2:29.37 PM

Item ID: D119-675-012

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Heli-Access-Step RH

Start Date: 9/03/13

Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 9/03/13

Req'd Qty: 5.00

\*5\*

Customer:

Reference: ECN13-627

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

DSI9647

A

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile &amp; type labels per PPP 119-675-012 CHG004

110

Pick Kit

0.00

\*110\*

Packaging

Memo

0.00

Packaging

PULL FROM STOCK:

2 X D119-675-012 B86161

3 X D119-675-012 B84003

ADD TO EACH KIT PER ECN13-627

4 X D2732-0.32

4 X D3041-5

2 \* X D3041-7

8 X AN4-16A

8 X AN960JD416 (NAS1149D0463J)

8 X MS21042L4

<b>DART</b> Dart Aerospace Ltd. 1270 ABERDEEN ST. HAWKESBURY, ON, CANADA K6A 1K7			
P/N		D119-675-012	CHG
DESC.		Heli-Access-Step, RH	STC
LOT		B86161	STC
MODEL		Agusta A119/AW119MKII	STC
TC APPROVAL # 09-89		TEL: 1-613-632-5200	
CHG		CHG004	
STC		SR00948SE	

MADE IN CANADA D2729-1

# Work Order ID 106482

\*106482\*

Page 2

September-03-13 2:29:37 PM

Item ID: D119-675-012 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Heli-Access-Step RH  
 Start Date: 9/03/13 Start Qty: 5.00 \*5\* Cust Item ID:  
 Required Date: 9/03/13 Req'd Qty: 5.00 \*5\* Customer:  
 Reference: ECN13-627

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00 0.00		DAS 27 9-89 13 9 25		4			
130 *130* Packaging Packaging	Packaging  Memo REPACKAGE PER PPP USING NEW B/N AT CHG005, NEW LABELS REQ'D ADD PAPERWORK DSI9647 TO EACH KIT Identify and pack for shipping as per PPP D119-675-012 Location: 082	0.00 0.00				4	13/9/25	DAS 06 9-89	8
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00 0.00		CHG005		4	13-09-25	MF 13-9-25	



# Picklist Print

September-03-13 2:29:37 PM

Page 1

Work Order ID: 106482  
Parent Item: D119-675-012  
Parent Item Name: Heli-Access-Step RH

Start Date: 9/03/13  
Start Qty: 5.00

Required Date: 9/03/13  
Required Qty: 5.00

Comments: IPP Rev:D Removed Manufacturing JLM 05-11-01  
IPP Rev:E change to rev.b as per ECN1107 DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-16A BOLT		Purchased	No				Each	440.0000		8			SP

Location Loc Qty Loc Code

FG 5  
121541 5  
ST357 8  
124215 8  
ST514 247  
125427 200  
M126073 47  
ST515 180  
125396 180

DAS  
27  
9-89

DAS  
27  
9-89

D119-675-012  
Heli-Access-Step RH  
D2732  
Rubber Extrusion  
4 X D2732-032

DAS  
27  
9-89

Manufactured No  
Manufactured No

Location Loc Qty Loc Code

ST410 206.8962052  
70987 0.3  
83560 3.5962052  
94725 203

40X  
2x 86161  
3x 84003

1.068

D3041-5  
Clamp

DAS  
27  
9-89

Manufactured No

Location Loc Qty Loc Code

ST462 11  
37633 11

5.34  
4 20  
B106485 16X  
37633 44SPV

DAS  
06  
9-89

# Picklist Print

September-03-13 2:29:37 PM

Page 2

Work Order ID: 106482  
 Parent Item: D119-675-012  
 Parent Item Name: Heli-Access-Step RH

Start Date: 9/03/13

Required Date: 9/03/13

Start Qty: 5.00

Required Qty: 5.00

D3041-7 Manufactured No

Each 11.0000

Clamp

DAS  
27  
9-89

4X

Location

Loc Qty

Loc Code

ST462

11

37634

11

MS21042L4 Purchased No

Each 5,221.0000

Locknut

DAS  
27  
9-89

4X

Location

Loc Qty

Loc Code

FP001

50

122452

38

8182

12

ST314

10

m125708

10

st507

56

125535

23

m126073

33

ST509

4000

m126275

4000

ST510a

915

m126333

915

ST518

190

124231

190

106482 5X (2) SP1  
37634 5X

8

40X SP13-9-3

40X

September-03-13 2:29:37 PM

Shop Packet Print

Page 2

# Picklist Print

September-03-13 2:29:37 PM

Page 3

Work Order ID: 106482  
Parent Item: D119-675-012  
Parent Item Name: Heli-Access-Step RH

Start Date: 9/03/13  
Start Qty: 5.00

Required Date: 9/03/13  
Required Qty: 5.00

NAS1149D0463J Purchased No Each 5,552.0000  
WASHER

8 40x m/26221  
SP13-9-3

47  
DAS  
27  
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	2	
122441	2	
ST007	24	
121912	24	
ST294	149	
119097	1	
124198	35	
124778	113	
ST510a	5377	
M126221	5377	

# List Lots

Page 1 of 1

September-03-13 12:58:44 PM

Criteria : Item ID: 'D119-675-011', 'D119-675-012' All Locations All Warehouses All Quantity

Item ID Item Name	Warehouse ID Location ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Lot Code	Type Code	Comments
D119-675-011 Heli-Access-Step LH	Main Warehouse FG070	76854	6/18/12	1.0000		QC21	CHG004	
	Main Warehouse FG070	84002	11/26/12	2.0000		QC21	CHG004	
		<b>Total:</b>		3.0000				
D119-675-012 Heli-Access-Step RH	Main Warehouse FG070	84003	11/12/12	3.0000		QC21	CHG004	
	Main Warehouse FG070	86161	9/13/12	2.0000		QC21	CHG004	
		<b>Total:</b>		5.0000				



# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D119-675 REV. B AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D119-675 REV. 2  
REF. FAA STC SR00948SE & EASA STC EASA.IM.R.S.01458

## 1.0 INTRODUCTION:

The purpose of this Service Instruction is to improve installation of D119-675-011/-012 *Heli-Access-Steps*. This improvement consists of replacing the inboard D3042-1 Clamps and D2182B032 Rubber Cushions with D3041-5/-7 Clamps and D2732-032 Rubber Cushions.

For existing installations (D119-675-011/-012 *Heli-Access-Steps* @ Change 004 or earlier), this service instruction also recommends removal of the D2617-5 Bushings at the aft crosstube position to prevent the bearings in the D3041-1/-3 clamps from being pushed out and makes it permissible for operators to raise the step an additional 2.00 inches (51mm) to provide clearance for the ground handling wheels. Refer to section 2.0 of this Service Instruction.

New installations steps (D119-675-011/-012 *Heli-Access-Steps* @ change 005 or later) will have their parts list and instructions amended accordingly. Refer to section 3.0 of this Service Instruction.

## 2.0 INSTALLATION OF DSI 9647-011 CLAMP REPLACEMENT KIT:

- 2.1 The DSI 9647-011 Clamp Replacement Kit can be procured from Dart. One kit upgrades one step.
- 2.2 Remove and discard the D3042-1 Clamps, D2182B032 Rubber Cushions and hardware. Replace with the D3041-5/-7 Clamps, D2732-032 Rubber Cushions and hardware as shown in Section B-B and C-C of this Service Instruction.
- 2.3 Tighten clamp bolts. Do not exceed torque of 60 in-lb (6.8 nm) on the nuts.  
**CAUTION:** Over-torquing the nuts could lead to structural damage of the clamps.
- 2.4 Amend weight and balance per section 4.0 of this Service Instruction.

1004482

A	NEW ISSUE	AJS	13.04.04
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	<b>DART AEROSPACE USA, INC</b> KENT, WA	
DRAWN	AJS		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9647	SHEET 1 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CLAMP REPLACEMENT	NTS
DATE	13.04.04	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

### 3.0 INSTALLATION INSTRUCTIONS:

For D119-675-011/-012 *Heli-Access-Steps* @ CHG 005 or later.

Step installations for the A119/AW119 MKII rotorcraft are illustrated in Figure 1 and View A-A, Sections B-B, and C-C of this Service Instruction.

3.1 Remove the existing crosstube-mounted short steps.

- a) For **A119 model** aircraft, remove the Agusta P/N 109-0570-33-101/-103 step by drilling out the 4 attachment rivets per step. Plug holes with rivets and touch up paint per the Aircraft Maintenance Manual as required.
- b) For **AW119 MKII model** aircraft, remove the Agusta P/N M031-01S002-041 step by removing the MS21920-20/-22 clamps. Touch up paint per the Aircraft Maintenance Manual as required.

**NOTE:** It is acceptable to leave the short steps on the landing gear provided they do not interfere with the installation of the Dart step in accordance with the dimensions shown in View A-A of Figure 1.

3.2 Install the D3041-1/-3 Clamps on the step as follows.

- a) For **A119 model** aircraft, install the D3041-1/-3 Clamps per Sections B-B and C-C of this Service Instruction.
- b) For **AW119 MKII model** aircraft, install the D3041-1 Clamps per Sections B-B and C-C of this Service Instruction.

3.3 Present the step to the outboard side of the crosstubes. Propping the step at the appropriate height (see Figure 1) can facilitate installation.

3.4 Install the D2732-032 Rubber Cushions under the D3041-1/-3/-5/-7 Clamps (see Sections B-B and C-C (of this DSI)).

3.5 Find the appropriate step height by locating the step/clamp as shown in View A-A. Locate the forward D3041-1/-3 Clamp 7.8"- 10.4" above the crosstube cuff. Locate the aft D3041-1 Clamp 7.8"-11.6" above the crosstube cuff. The distances given are from the crosstube cuff to the bottom-most clamp.

3.6 Tighten the clamp bolts. Do not exceed torque of 60 in-lb (6.8 Nm) on the nuts.

**CAUTION:** Over-torquing the nuts could lead to structural damage of the clamps.

3.7 Amend weight and balance per section 4.0 of this Service Instruction.

10/11/13

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DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9647	SHEET 2 OF 6
APPROVED		TITLE	SCALE
DE APPR.		CLAMP REPLACEMENT	NTS
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#### 4.0 WEIGHT AND BALANCE:

Use the following Weight and Balance for D119-675-011/-012 @ CHG 005 or later.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D119-675-011	11.8 lb	-32.4 in	-382 in-lb	121.3 in	1431 in-lb
Heli-Access-Step™, LH	5.4 kg	-1.28 m	-6.9 m-kG	3.08 m	16.6 m-kG
D119-675-012	11.8 lb	+32.4 in	+382 in-lb	121.3 in	1431 in-lb
Heli-Access-Step™, RH	5.4 kg	+1.28 m	+6.9 m-kG	3.08 m	16.6 m-kG

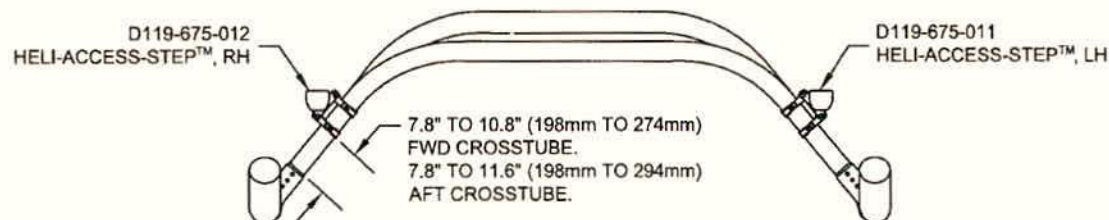
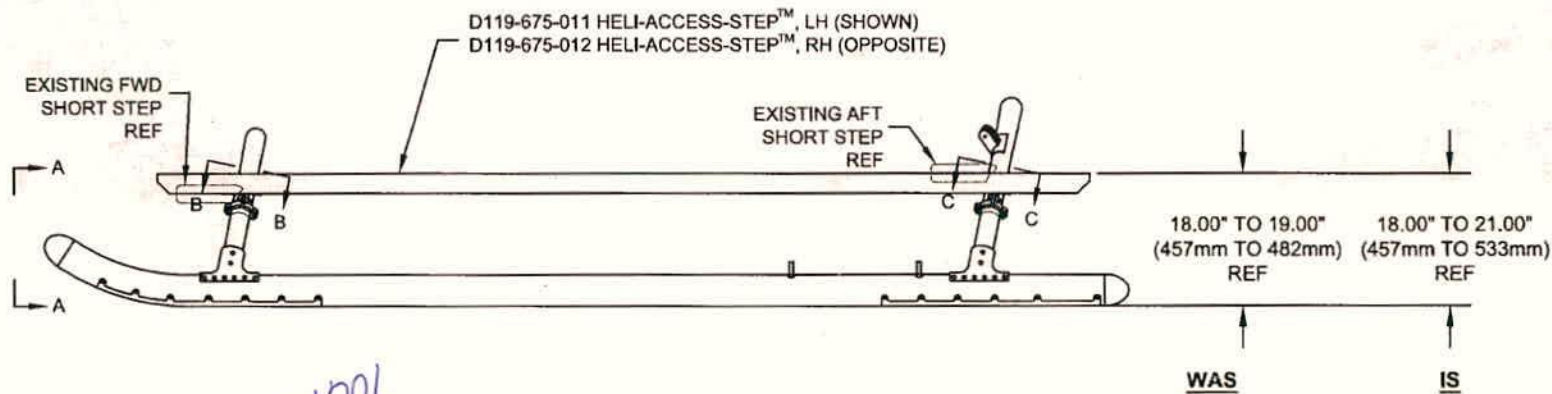
#### 5.0 PARTS LISTS:

QTY -011	Part Number	Description
X	DSI 9647-011	CLAMP REPLACEMENT KIT
4	D2732-032	RUBBER CUSHION
4	D3041-5	CLAMP
2	D3041-7	CLAMP
8	AN4-16A	BOLT
8	AN960JD416	WASHER
8	MS21042L4	BOLT

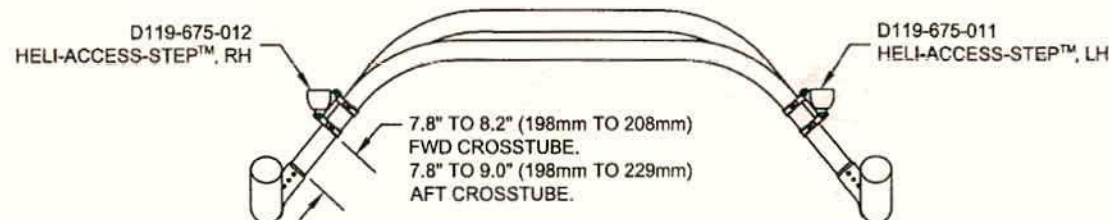
Use the following Parts List for D119-675-011/-012 @ CHG 005 or later.

Qty -011	Qty -012	Part Number	Description
X		D119-675-011	HELI-ACCESS-STEP™, LH
	X	D119-675-012	HELI-ACCESS-STEP™, RH
8	8	D2274	RADIUS BLOCK
4	4	D2617-3	BUSHING
4	4	D2617-5	BUSHING
8	8	D2732-032	RUBBER CUSHION
4	4	D3041-1	CLAMP
2	2	D3041-3	CLAMP
4	4	D3041-5	CLAMP
2	2	D3041-7	CLAMP
1		D3043-041	STEP WELDMENT LH
	1	D3043-042	STEP WELDMENT RH
4	4	AN4-15A	BOLT
8	8	AN4-16A	BOLT
12	12	AN960JD416	WASHER
12	12	MS21042L4	NUT (OR MS21042-4)

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DRAWN	AJS		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9647	SHEET 3 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CLAMP REPLACEMENT	NTS
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VIEW A-A



VIEW A-A

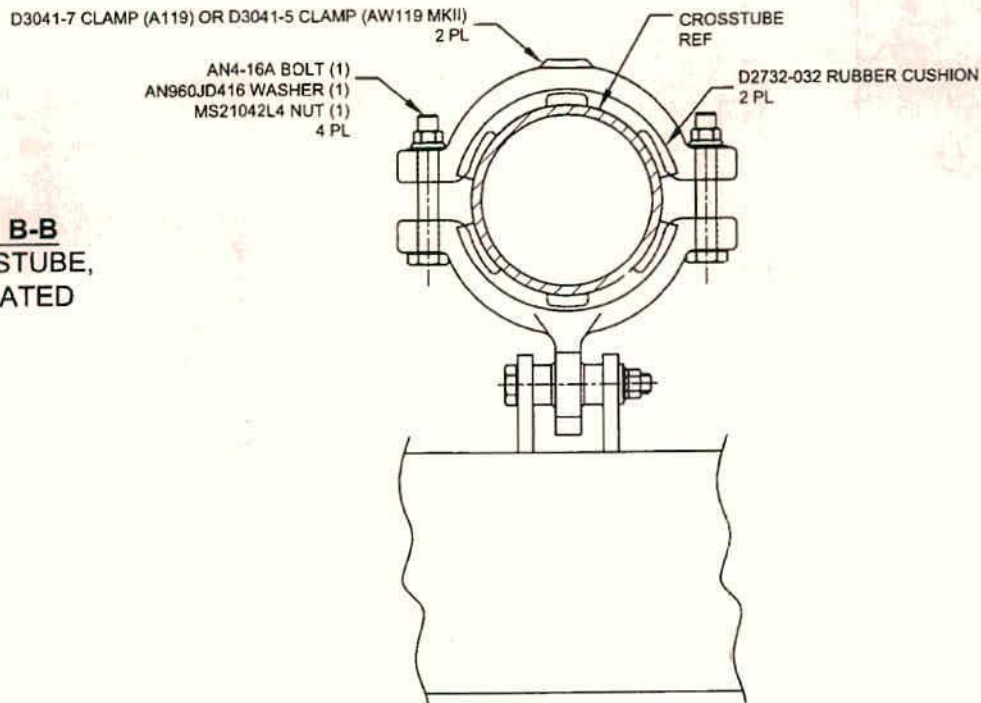
FIGURE 1 - D119-675-011/-012 HELI-ACCESS-STEP™

DESIGN	AJS	<b>DART AEROSPACE USA, INC</b> KENT, WA DRAWING NO. DSI 9647 REV. A SHEET 4 OF 6 SCALE NTS
DRAWN	AJS	
CHECKED		
MFG. APPR.	N/A	
APPROVED		
DE APPR.		TITLE
DATE	13.04.04	CLAMP REPLACEMENT

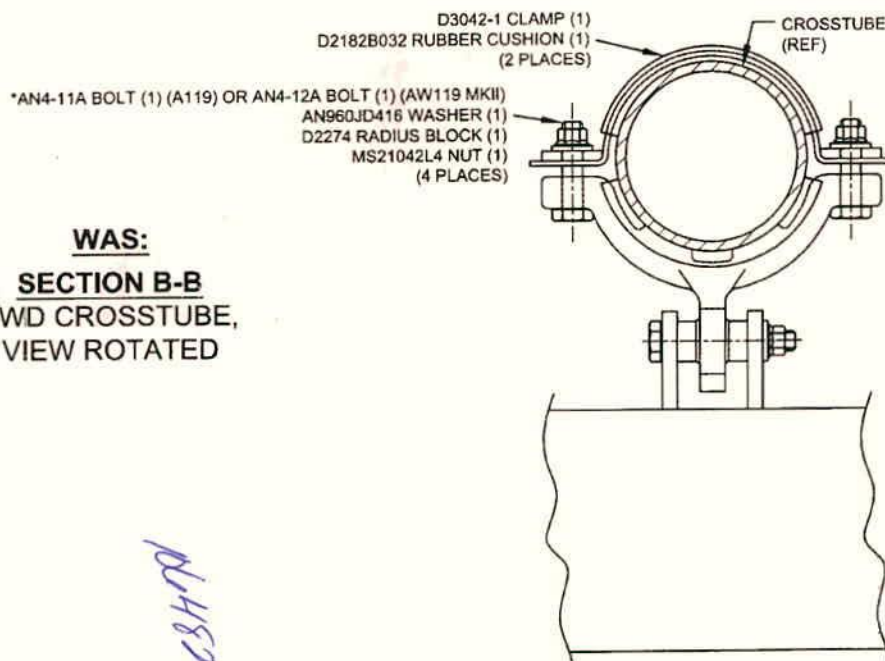
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**IS:**  
**SECTION B-B**  
 FWD CROSSTUBE,  
 VIEW ROTATED



**WAS:**  
**SECTION B-B**  
 FWD CROSSTUBE,  
 VIEW ROTATED

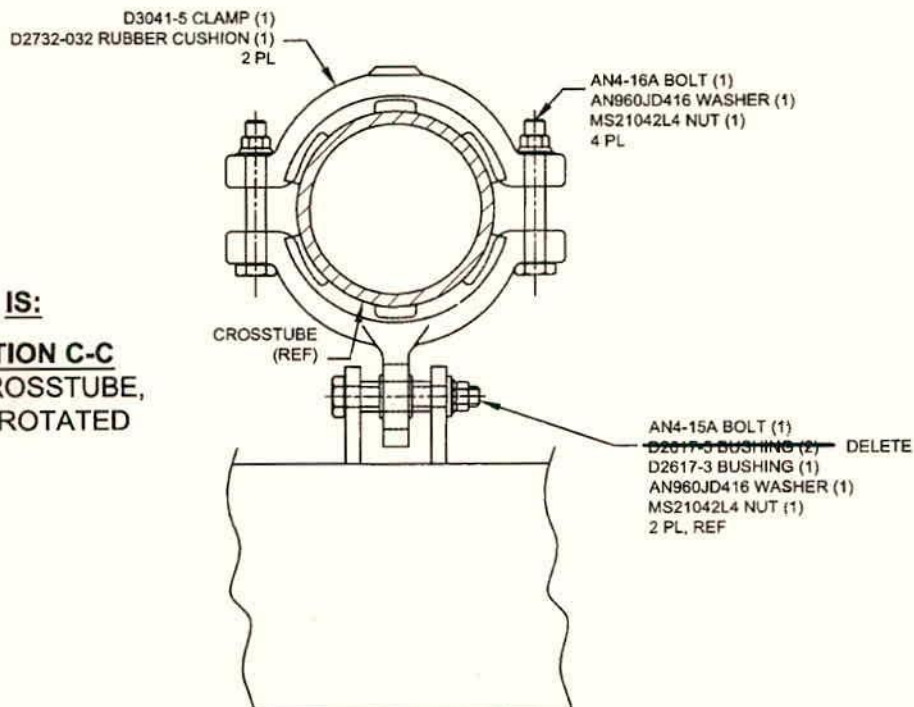


*10-4-89*

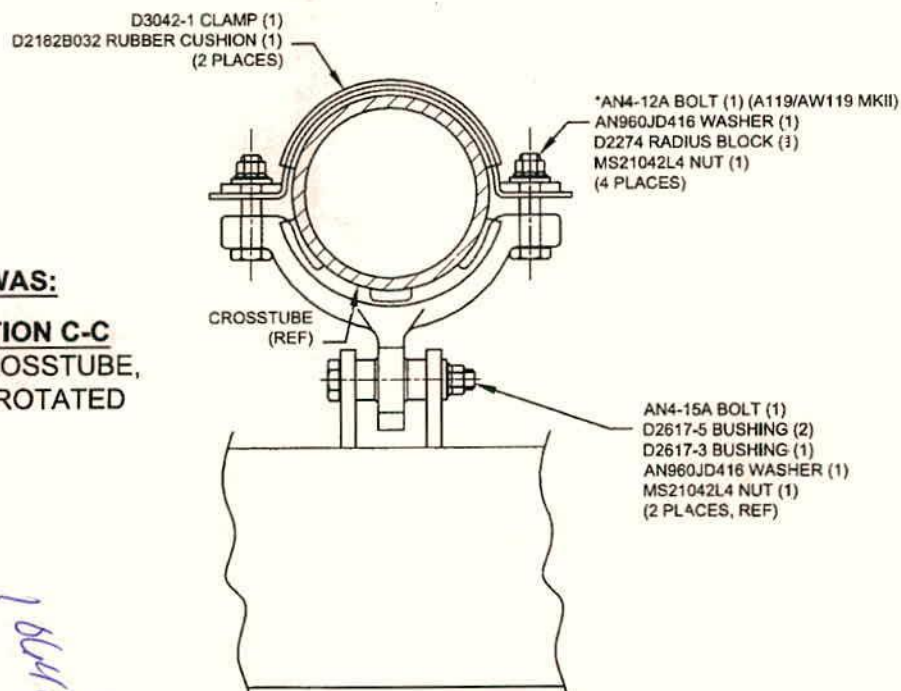
DESIGN	AJS	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9647	SHEET 5 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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**IS:**  
**SECTION C-C**  
**AFT CROSSTUBE,**  
**VIEW ROTATED**



**WAS:**  
**SECTION C-C**  
**AFT CROSSTUBE,**  
**VIEW ROTATED**



DESIGN	AJS	<b>DART AEROSPACE USA, INC</b> KENT, WA	
DRAWN	AJS		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9647	SHEET 6 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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Work Order ID 106482

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\*106482\*

Page 1

Item ID: D119-675-012

Revision ID:

Item Name: Heli-Access-Step RH

Start Date: 9/03/13

Start Qty: 500

Required Date: 9/03/13

Req'd Qty: 500

Reference: ECN13-627

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Stop

\*NS2\*

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

DSI9647

A

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Photocopy bluefile & type labels per PPP 119-675-012 CHG004

Document Control

see attachment

ML5 13-09-19

5

10

Pick Kit

0.00

\*110\*

Memo

0.00

PULL FROM STOCK:  
2 X D119-675-012 B86161  
3 X D119-675-012 B84003

ADD TO EACH KIT PER ECN13-627

4 X D2732-0.32

4 X D3041-5

2 \*X D3041-7

8 X AN4-16A

8 X AN960JD416 (NAS1149D0463J)

8 X MS21042L4

5x

32

20

13-9-3

## Change Record

PAGE 1 OF 1

Part Number: D119-675-011/-012

Description: HELI ACCESS STEP

[illegible]